Curriculum Vitae

Yuancheng Xu

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EDUCATION

Southern University of Science and Technology, China   *2016-Present*
Major in Mathematics and Applied Mathematics
GPA 3.94/4.00 (ranking: 1/94)
New York University   *Spring, 2019*
Visiting Student at the Courant Institute of Mathematical Sciences
GPA 4.00/4.00 (including two PhD-level courses)

RESEARCH EXPERIENCE

Prof. Christina Ramirez's Group (Statistics and Machine Learning)   July,2019 – Present

UCLA-CSST Program   *UCLA, Biostatistics Department*

- Independently designing a tree-based algorithm (Longtree) for longitudinal data with correlated features. The algorithm first selects features and then gives predictions using linear mixed effect model based recursive partitioning.

- Simulation of Longtree on datasets that includes auto-regressive structure and treatment-time interaction. Longtree greatly outperforms other tree-based methods for longitudinal setting such as RE-EM tree.

Prof. Sukbin Lim's Lab (Computational Neuroscience)   June – Sep,2018

Undergraduate Research program   *NYU Shanghai, Neuroscience Department*

- Using the theory of differential equations to derive conditions for persistent activity in both parametric and spatial neural networks.

- Simulation of negative derivative feedback control model that attains persistent firing rate in the absence of stimulus using high-performance computing resources.

- Investigating spike-timing dependent plasticity (STDP) rule that can lead to persistent neural activity in parametric networks.

Prof. He Bingsheng's Group (Optimization)   Feb 2018
Seminar on image processing   *SUSTech, Mathematics Department*

- Learning how to develop mathematical models on graph denoising and graph restoring.

- Using optimization methods such as the alternating direction method of multipliers (ADMM) algorithm to solve the established model.

STANDARD TESTS

TOEFL Test	106	(30 R, 28 L, 23 S, 25 W)	Aug 2018
GRE General Test	336+4.0	(166 V, 170 Q, 4.0 AW)	Sep 2017
CET-6	642		Dec 2017

SELECTED AWARDS

Outstanding Undergraduate Scholarship (First Prize, 5%)	2017, 2018
Outstanding Freshmen Scholarship	2016
National Mathematical Olympiad (National Second Prize)	2015

COMPUTATIONAL SKILLS

Python, MATLAB, R, JAVA, C, LaTeX, HTML.